

Claims

1. A fuel injection valve for internal combustion engines, with a housing (1) that contains a moving valve element (12) whose movement counter to the elastic force of a spring element (30) controls the fuel supply to the combustion chamber (6) of the engine, characterized in that the spring element (30) is a cylindrical sleeve with a longitudinal axis (14), wherein at a number of locations, the wall of the sleeve has openings (45) that are separate from one another and allow the spring element (30) to be elastically deformed in the direction of the longitudinal axis (14).
2. The fuel injection valve according to claim 1, characterized in that the openings (45) in the wall of the spring element (30) essentially extend in a radial plane of the longitudinal axis (14) of the spring element (30).
3. The fuel injection valve according to claim 2, characterized in that two similar openings (45) lie in a radial plane of the spring element (30), wherein the openings (45) are separated from one another by connecting pieces (48).
4. The fuel injection valve according to claim 3, characterized in that openings (45) are disposed in at least two radial planes, wherein the openings of the one radial plane are rotated by 90° in relation to those in the adjacent radial plane.
5. The fuel injection valve according to claim 1, characterized in that the openings (45) are embodied as slot-shaped.

6. The fuel injection valve according to claim 5, characterized in that the ends (47) of the openings (45) are rounded.

7. The fuel injection valve according to claim 6, characterized in that the openings (45) have a longitudinal axis (52) in relation to which they are symmetrical and that the openings (45) have the form of a longitudinal slot that tapers in the middle in relation to this longitudinal axis (52).

8. The fuel injection valve according to claim 1, characterized in that the spring element (30) is contained in the housing (1) in an elastically prestressed position.